

## WASTE WATER TREATMENT USING AN MBRA IN A MEDIUM SIZED WINERY (CIUDAD REAL)

(keywords: discharges of wineries, bioreactor membrane MBR, seasonality, high load organic)



Galan de Membrilla wineries is a winery located in Ciudad Real (Spain) dedicated to the elaboration of wines.

The waste waters of this type of companies show a marked seasonality with a high season between September and December coinciding with the reception of grapes. During this period the waste waters have a high organic load, imbalance in nutrient ratios and an increase of flows.

The company requires a technical solution that allows for a fast adaptation of the treatment to efficiently cope with this variability characterised by a rapid increase in load and flow and guarantees treated waters suitable for discharge to public river bed. In addition, due to its location close to houses requires a low level of noise, no production of odours and minimum occupation of space. So, the company opted for a biological treatment of type MBR that fully meets these requirements. The technology of ultrafiltration MBRable<sup>®</sup>, thanks to its smaller size of pore (0.02  $\mu$  m) guarantees a high effluent quality and a rapid adaptation of biomass in front of increases in load. Due to its modularity it minimizes space requirements and facilitates possible future expansions of the system.

The installed MBR plant has a capacity to treat a flow rate of up to 100 m<sup>3</sup>/day, Europe Membrane provided a Cassette unit MBRable<sup>®</sup> equipped with 430 m<sup>2</sup> of ultrafiltration membranes expandable up to 504 m<sup>2</sup>, installed in a membrane tank of PP in external configuration.



Year 2015

Sector winery

Flow 100 m<sup>3</sup>/d

BOD<sub>5</sub> influent: 9000 mg/l

BOD<sub>5</sub> effluent: <25 mg/l

